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## WHAT IS CLAIMED IS:

- 1. A liquid dishwashing detergent composition suitable for use in hand dishwashing, said composition characterized by:
  - a) a low molecular weight organic diamine having a pK1 and a pK2, wherein the pK1 and the pK2 of said diamine are both in the range of from 8.0 to 11.5;
  - b) an anionic surfactant;
  - c) an amphoteric surfactant; and
  - d) a solvent selected from the group consisting of a diol, a polymeric glycol and mixtures thereof wherein said diol is selected from the group consisting of:

$$\begin{array}{c|cccc}
OH & R_7 & OH \\
& & | & | \\
HC & (-C - )_n - C - R_8 \\
& & | & | \\
R_7 & H
\end{array}$$

wherein n = 0-3,  $R_7 = H$ , methyl or ethyl; and  $R_8 = H$ , methyl, ethyl, propyl, isopropyl, butyl and isoubutyl; and wherein the polymeric glycol is selected from the group consisting of:

$$(PO)_x (EO)_v H$$

wherein PO represents a propylene oxide group and EO represents an ethylene oxide group and x+y is from 17 to 68, and x/(x+y) is from 0.25 to 1.0; and wherein the pH (as measured as 10% aqueous solution) is from 5.0 to 12.5 and wherein the mole ratio of said anionic surfactant to said amphoteric surfactant to said diamine is from 100:40:1 to 9.0.5:1.

- 2. A liquid dishwashing detergent composition according to claim 1 further characterized by a buffering agent and wherein the composition has a pH of from 10 to 11.5.
- 3. A liquid dishwashing detergent composition according to any of claims 1-2 wherein the diol is selected from the group consisting of propylene glycol, 1,2 hexanediol, 2-ethyl-1,3-hexanediol and 2,2,4-trimethyl-1,3-pentanediol and mixtures thereof.
- 4. A liquid dishwashing detergent composition according to any of claims 1-3 wherein the polymeric glycol is polypropylene glycol having a molecular weight of from 1000 to 5000.

5. A liquid dishwashing detergent composition according to any of claims 1-4 wherein said diamine is selected from the group consisting of:

$$R_2$$
  $N$   $C_x$   $A$   $C_v$   $R_4$   $R_5$ 

wherein  $R_{2-5}$  are independently selected from H, methyl, ethyl, and ethylene oxides;  $C_x$  and  $C_v$  are independently selected from methylene groups or branched alkyl groups where x+v is from 3 to 6; and A is optionally present and is selected from electron donating or withdrawing moieties chosen to adjust the diamine pKa's to the desired range; wherein if A is present, then both x and y must be 2 or greater.

- 6. A liquid dishwashing detergent composition according to any of claims 1-5 wherein the polymeric glycol is polypropylene glycol having a molecular weight of from 2000 to 4000 and is present in a range of from 0.25% to 5.0%, by weight of the composition.
- 7. A liquid dishwashing detergent composition according to any of claims 1-6 further characterized by a polymeric suds stabilizer selected from the group consisting of:
  - i) homopolymers of (N,N-dialkylamino)alkyl acrylate esters having the formula:

$$\begin{array}{c}
R \\
N - (CH_2)_n - O
\end{array}$$

wherein each R is independently hydrogen, C<sub>1</sub>-C<sub>8</sub> alkyl, and mixtures thereof, R<sup>1</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub> alkyl, and mixtures thereof, n is from 2 to 6; and

ii) copolymers of (i) and

wherein R<sup>1</sup> is hydrogen, C1-C6 alkyl, and mixtures thereof; provided that the ratio of (ii) to (i) is from 2 to 1 to 1 to 2; and wherein said polymeric suds stabilizer has a molecular weight of from 1,000 to 2,000,000 daltons.

- 8. The liquid dishwashing detergent composition according to any of claims 1-7 further characterized by an α-amylases having a specific activity at least 25% higher than the specific activity of Termamyl® at a temperature range of 25°C to 55°C and at a pH value in the range of 8 to 10, measured by the Phadebas® α-amylase activity assay.
- 9. A method for cleaning a substrate in a manual dishwashing operation characterized by the steps of:
  - (a) contacting the substrate with a liquid dishwashing detergent composition prepared according to claim 1; and
  - (b) allowing the detergent composition to remain in contact with the substrate for a sufficient time to provide effective cleaning benefits to the substrate.
- 10. A method according to any of claims 1-9, wherein the liquid dishwashing detergent composition is applied to the substrate with no more than 90% dilution with water.

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